Editorial

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Music & Medicine: Debating Evidence-Based Strategies and Outcomes

The inclusion of music interventions in medical settings is a growing modality and as such necessitates that rules of evidence guide the mechanisms which support practice. An important aspect of this journal is to present evidence that seeks to establish the efficacy of treatment and to encourage debate. Evidence-based medicine, a model of investigation credited to Archibald Cochrane in the twentieth century, proposed that medical intervention not be confused with medicine based solely on research evidence. Cochrane's charge implies that interventions be studied and outcomes synthesized, formulized, and judiciously linked to patient outcomes. Refinement of the way evidence is gathered and systemized is the charge of researcher. As bodies of research in universities and hospitals, as well as within online course modules, gain accessibility and focus on systematically teaching methods of how one can best learn, understand, and practice medicine effectively and judiciously, at times there seems to be less emphasis placed on methods of learning related to the complexity of the most direct source of evidence—the patient. The adherence that evidence stay linked to current modes of best practice and to the clinical expertise of the researcher has led toward a filtration process. Many research experts have developed notable systems about how data inclusion and synthesis reflect relevant outcomes and how then, and only then, will it be considered to be valid (Cauchon et al., 2002).

In a commonly quoted article in the *British Journal of Medicine*, Sackett and his colleagues wrote:

> Increased expertise is reflected in many ways, but especially in more effective and efficient diagnosis and in the more thoughtful identification and compassionate use of individual patients' predicaments, rights, and preferences in making clinical decisions about their care. By best available external clinical evidence we mean clinically relevant research, often from the basic sciences of medicine, but especially from patient centered clinical research into the accuracy and precision of diagnostic tests (including the clinical examination), the power of prognostic markers, and the efficacy and safety of therapeutic, rehabilitative, and preventive regimens. (Sackett, Rosenberg, Muir, Haynes, & Richardson, 1996, p. 72)

The clause "especially from patient centered clinical research" is striking and calls upon us to continue to consider the context in how and what we are investigating. *Music and Medicine* offers a broad spectrum of what is understood to be "evidence." One range of evidence will be encompassed by quantitative studies that demonstrate the "when," "which," "how much," "how often," "what does it cost," and "at what risk" types of questions. Another range of evidence will include the study of "why," "what happens," and "what does it mean" types of inquiries. Yet other types of evidence will be a mixture of the two and will address "what happened" and "what it meant for me, as the researcher." All of these inquiries have their validity in addressing the delivery of modern health care as it occurs throughout the world.

However, if we move away from the concept of *treatment* and look into the concept of *care*, then the rules may change and we can speak more openly and authentically about the *qualities of care*, addressing perhaps the most critical of nuances in the function of treatment that even the most stringent mechanisms of investigation may not catch. This leads us into a broad debate about how we measure or ascertain the outcomes of our interventions. Music medicine and music therapy are overarching terms for a variety of practices in a plethora of clinical, educational, and social fields. This variety is not inherently difficult or is not, in and of itself, complex to investigate, but it does call for an interdisciplinarity of knowledge. The span of information uncovered from

one medical practice to another, for example from surgical to psychiatric domains, reflects the realization that "clinical medicine" is also a craft of diverse practices. Interdisciplinarity implies that we have a broad range of discourse within the many fields related to music and medicine. What we determine to be a measure of outcome will depend upon the setting within which we practice and the people with whom we are working, including our patients and caregivers, and their vast influences of cultural diversity.

Indeed, as we will see in the SAGE Prize–winning paper by Suzanne Hanser, while music therapy has become an acceptable practice in some settings as integrative medicine, we know that the assessment of such a practice will be inevitably complex as we cannot tease out the assessment of one practice from the range of practices within which it is integrated.

Furthermore, we know that in many situations where music is used as an intervention, the time frame of the intervention cannot be measured as succinctly as a pharmaceutical intervention for a specific disease entity. Tényi et al.'s investigation of musical hallucinations stretches clinical thinking and theory about musical hallucinations. Despite frequent reports of its existence, past reports view it rather narrowly, as a single symptom, where the Tényi et al. case report suggests coexistent factors.

Monika Jungblut, in this issue and with her colleagues in the previous issue, describes an effective music intervention for improving the speech fluency of people with aphasia as a form of rehabilitation. While the form of measurement is specific and accurate (a specialized aphasia inventory), the time scale of intervention can be over a year, and it is almost impossible to control for no other interventions—nor, indeed, for life to be without significant events during the treatment period.

In another article, Alan Turry explores the journey of a woman faced with a life-threatening prognosis who rejected standard treatment and sought music and improvised song. Through many years of music therapy treatment, she believed that it was the music that fortified her state of health. Turry diligently looked toward the context of his clinical work; in careful and fastidious analyses he uncovered themes and provided enriching syntheses of how the improvised songs served emotional release. The outcomes of his analyses and the music process offer a trustworthy, patient-based context. In clinical practice, the questions always remain of how to evaluate and interpret what we hear and perceive in a musical context in terms of both musical form and expression, and how that relates to personal expression and behavior in the context of an illness. There are music therapy rating scales, but many of them are neither specific for music therapy, nor are they validated.

To improve our music interventions, we must first understand the complex process of health production, particularly in the field of chronic illness where many of us work. An understanding of health production must also be supplemented with measurement tools which represent the values of the producers at the work-face (practitioners), and the consumers with whom they meet (patients). It is imperative that we develop a common language for health outcomes that is understood by the consumers (patients), deliverers (practitioners), and providers (those who pay).

The difficulty facing most of us in our clinical work is how to analyze the work we have before us using a systematic procedure that has therapeutic and clinical validity, and that remains true to the art medium itself (Aldridge, 1996; Aldridge & Aldridge, 2008). If we wish to discover how a particular creative art therapy works, then it is of paramount importance to maintain a focus on the work using the material traces of that work. What we need to develop is a means of discerning at what level we are describing, or interpreting, the traces before us.

In the development of any form of assessment, we need to confirm what we are seeing with the interpretations of our colleagues (Loewy, 2000). This is what we do continually in clinical practice within multidisciplinary teams. At a research level, we can construct this very implication of meaning into a formal process of validation and interclinician agreement. In 1985, Eisler, Szmulker, and Dare used videotapes of family therapy practice to validate the clinical concepts they were using. Although the family therapists viewing and rating the videotapes were from a variety of family therapy training backgrounds, they reached a satisfactory level of agreement to demonstrate that clinical concepts are robust when based on systematic observation.

Eisler et al.'s (1985) study was the foundation for a series of music therapy studies. Examples from music therapy sessions were submitted to other therapists or researchers for validation. For example, Pilz (1999) focused on the concept of "resistance in music therapy" in his doctoral dissertation. He asked various panels of listeners to hear audiotaped examples of what he described as "resistance" distributed

amongst an equal number of audio examples where there seemed to be "no resistance." Experienced therapists were able to recognize this clinical phenomenon, and more importantly, novice listeners could also be taught to recognize the phenomenon.

In another study, Hoffmann (2002) identified those moments in music therapy when phrasing occurs. He submitted examples of phrased and unphrased playing to a panel of colleagues, and they were able to identify the phenomena accurately. Thus we are able to validate our subjective understandings made at an abstract level by submitting examples for validation to the broader community of practitioners or inquirers. Moreau (2003) has been working on a rating scale for measuring expression and communication in children and adolescents since 1994. In a process of item testing and reduction, the scale has been modified in clinical practice and validated by an initial evaluation process with 52 raters on the basis of 10 video scenes of different adolescent patients in a psychiatric clinic (Moreau, 1996, 2003).

In addition to agreeing amongst ourselves about validity and then considering how we validate what we have come to know within the broader milieu community, we need to be critical and open to constant critique and evaluation of our systems. In the current willingness amongst researchers and practitioners, and in a newly accepted culture of integration between medical-clinical undertakings, we also should be critical about the area of inquiry and the context by which we choose to investigate. Researching human beings faced with life-threatening illness, for example, requires investigatory prowess that often stretches beyond the parameters of what most biomedical clinical conditions would include as measurable variables. For instance, the investigator if researching the symptoms of a patient who is critically ill may need to include a means of assessing within an explanatory model context.

Kleinman (1978) was among the first to suggest that the elicitation of a patient's explanatory model can further mutual understanding and help form a context of identification of need. Providing a mechanism for an explanatory model implies that in our investigation of seeking to better the biomedical parameters of symptoms and disease, we must acknowledge that there are aspects of human "ethnography" that cannot be uncovered through predetermined questions. Furthermore, these questions can provide more accurate insight to the conditions of intended exploration, as set forth within the predetermined protocol or the area of intended study. As the contextual history of each and every human being is different from the next, we might strive to "not only listen to the *patient*, but to share and interpret the *clinician's* personal explanatory model and the explanatory models of biomedicine as these apply to the patient's illness" (Johnson, Cook, Giacomini, & Willms, in Hallenbeck, 2002, p. 669).

Throughout the coming issues of this journal we will present papers that offer ways of understanding, sometimes of measuring, music in medicine initiatives, and these will range from case studies, through discussions of valid research instruments, including qualitative descriptions and recommendations for clinical trials.

When we address interventions and outcomes of health care in an integrative perspective, we are not only concerned with the medicinal and economic aspects of health, but also the refined practice of "caring." It is this qualitative feature that can become lost in the debate of evidential findings. And it is this function of health care delivery which can be stimulated by creativity, incentive, and quality of treatment. The study of music in medicine may stimulate our ability to objectify by demanding that we articulate health care variables in terms of achieving evidence through inclusion of quality, safety, and culturally sensitive aspects of care. The integration of music and medicine calls upon us to address these initiatives into our health care delivery.

The reader will have noticed by now that we have not even begun to discuss "what is health?" which surely would be a prerequisite for measuring health outcomes, and we encourage papers on this topic.

Certainly meeting health care, educational, and social needs is a matter of social strategy and political will. Health, like music, is not a homogenous concept; it is differentially understood. Health care needs are negotiated and are not static outcomes that are written in tablets of stone. Music interventions and music therapy, like medicine, are not isolated disciplines but an agglomeration of concepts taken from a variety of fields. These fields include the arts, the humanities, and the sciences. In this issue Jane Edwards presents the history and development of music and medicine in Ireland. As a country feature, and in line with the International Association for Music and Medicine's mission to expand the vision and installation of music and medicine internationally, this article provides both a learning and

a training perspective that ignites an incentive for future research and growth. The more we understand the medical, historic, and clinical domains of a country and can meld this learning within the context of a country's folklore, music, and rich tradition, the better we begin to embrace how growth can occur. This article gives incentive for how music in medicine is being launched, and there is much to learn from Ireland's initiatives, particularly at the University of Limerick where graduate medical education is embarking upon true integration with the music and arts.

One such exemplar researcher from this novel initiative in Ireland is Simon Gilbertson. In this issue, Gilbertson sets a significant precedent for an underserved population, through investigation of music therapy interventions for children with traumatic brain injury. This study not only defines music interventions comprehensively but also offers a search strategy for systematic-pragmatic literature reviews. This novel approach not only seeks to clarify and further the knowledge of music referencing in standard bibliography, but can serve as a prototype for ensuing the systematic reviews of other music and medicine topics throughout a range of fields and applications. As a result, the study also offers a search strategy for systematic-pragmatic literature reviews of other fields and topics.

The social understandings of health and how to practice therapy are not fixed. Patients and health care professionals negotiate solutions to health care needs from an extensive cultural repertoire of possibilities. This repertoire is composed of understandings from Western medicine, but also from folk or traditional medicine and modern developing theories of psychotherapies and creative arts therapies. This is the broader meaning of integration that is necessary for integrated medicine and a fundamental reason for the development of this journal.

There are, however, factors common to a variety of health understandings. These understandings include promotion and prevention, health maintenance, and indications for treatment. Such factors are influenced by economic strategies and cannot be divorced from considerations of community welfare. The future delivery of health care will also depend upon accurate information about the management of resources. To assess health care we will need accurate and appropriate and culturally sensitive tools of assessment. In this realm, music may play a focal feature of clinical relevance. Case studies, in their traditional role of clinical reflection and advocacy, play an important role in establishing practice models. We can use tools of assessment that relate to the management of resources while remaining true to the people we are seeking to represent.

What we invite in this journal are contributions from the various traditions of thought; psychological, musical, medical, sociological, and philosophical; contributions that influence how we choose to undertake and participate in music and medicine research. Each of these discourses has its own legitimacy.

Research is of no use if it sits upon a library shelf. Our aim is to demonstrate how research findings can be applied in daily practice. We find such demonstration in the articles by Kirsten Stewart and Monika Jungblut. In the previous issue they presented their research findings: Stewart (2009) in her development of a model for evaluating trauma in the neonatal intensive care unit and Jungblut (Jungblut et al 2009) through in-depth analysis of a case where the referring problem is aphasia. Within this issue, we see how those findings can be integrated into daily practice based on experience.

We are aware that clinicians and health care providers are more likely to accept such research findings if the results are about specific problems, as they are, and additionally, if the research is based in a naturalized setting rather than a laboratory. We encourage readers to submit papers based on practice and how they have developed measures to assess that practice. Neonatal care is a major part of health care delivery, and aphasia, as a consequence of strokes, is a major cause of disability and thereby a health care challenge that will only increase in the future. As the reader will see, music interventions within an integrative health care approach are tackling major health care problems.

Bodies of music therapy and music medicine knowledge are not universalizable, but we understand there are already developed commonalities of practice. In practice, we need to look at specific approaches to recognized needs as identified by the practice communities in which we work. How we weave those localities of understandings into the cloak of knowledge is the basis of our journal, it forms the ground of authoritative reviews, research studies, and practice recommendations.

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